REMARKS

Claims 1-37 are pending in the application. Claim 1 and Claim 13 have been amended. Claims 38-45 have been added.

Claim Rejections – 35 USC § 103

The Patent Office rejected claims 1-3, 8, 9, 12-14, 23, 24, 27, and 28 under 35 U.S.C. § 103(a) as being unpatentable over Song et al., U.S. Patent No. 6,046,721 (Song) in view of Iwaki, U.S. Patent No. 6,567,097 (Iwaki) and Ersoz et al., U.S. Patent No. 5,287,189 (Ersoz).

The Patent Office rejected claims 4-7, 15-18, and 29-37 under 35 U.S.C. § 103(a) as being unpatentable over Song in view of Iwaki, Ersoz, and York, U.S. Patent No. 5,850,340 (York).

The Patent Office rejected claims 10, 11, 19-22, 25, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Song in view of Iwaki, Ersoz, York, and McGraw et al., U.S. Patent No. 6,300,980 (McGraw).

Applicant respectfully traverses. Applicant respectfully submits claims 1-37 include novel and nonobvious elements. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Ryoka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). *See also In re Wilson*, 165 U.S.P.Q. 494 (C.C.P.A. 1970). Also, "in order to render a claimed apparatus or method obvious, the prior art must enable one skilled in the art to make and use the apparatus or method." *Rockwell Int'l Corp. v. United States*, 147 F. 3d 1358, 47 USPQ 2d 1027, 1032 (Fed. Cir. 1998) (citing *Motorola, Inc. v. Interdigital Tech. Corp.*, 121 F. 3d 1461, 1471, 43 USPQ 2d 1481, 1489 (Fed. Cir. 1997)). Therefore, "a reference published before a patent's critical date is prior art only for that which the reference enables." *F.B. Leopold Co. v. Roberts Filter Mfg. Co.*, Civ. App. 96-

1218 (Fed. Cir. July 2, 1997) (unpublished) (citing *Beckman Instruments, Inc. v. LKB Produkter AB*, 892 F.2d 1547, 1551, 13 USPQ 2d 1301, 1304 (Fed. Cir. 1989)).

Claim 1 is directed to a display apparatus for use with a host computer system and generally includes a communication channel that allows information and commands to flow between the host computer system (computer) and the display apparatus, a microprocessor for receiving commands from the computer, the microprocessor having control logic for switching said display apparatus between interlaced and noninterlaced modes of operation in response to commands, and an enabled overlay window. Claim 1 includes elements that are not disclosed, taught, enabled, or suggested by Song in view of Iwaki and Ersoz. Neither Song, Iwaki, nor Ersoz disclose, teach, enable, or suggest individually or in combination a communication channel that allows information and commands to flow between the computer and the display apparatus, a microprocessor for receiving commands from the computer, and the microprocessor having control logic for switching said display apparatus between interlaced and noninterlaced modes of operation in response to commands.

The Patent Office asserts that the VGAFP and the TVFP lines of Song column 3, lines 25-35 (FIG. 1) are equivalent to the communication channel of Claim 1. However, the VGAFP and the TVFP lines of FIG. 1 in Song are not equivalent to the communication channel of Claim 1. The VGAFP and TVFP lines only send information out from the computer and the television to the display apparatus. The VGAFP and TVFP lines do not send out commands and do not allow the computer to receive information or commands from the display apparatus.

Claim 1 generally recites, "a communication channel between said host computer system and said display apparatus, the communication channel for *transmitting commands and information to and from said host computer system and said display apparatus*." Therefore, the communication channel of Claim 1 allows the computer to send out commands, receive commands, send out information, and

receive information. In the different possible embodiments of Claim 1, the computer, the television, or the display apparatus of Claim 1 may contain the microprocessor. But, wherever the microprocessor is located, the communication channel is able to send and receive information and commands to and from the computer, the microprocessor, and the display apparatus to switch the display mode of operation between interlaced and noninterlaced modes of operation. The computer may send a signal or information to the display apparatus periodically to check if interlaced and noninterlaced display signals are being sent to the display apparatus to decide if a command should be sent to the microprocessor to have the screen switched between the noninterlaced and interlaced display modes of operation and thus, the computer is sending information across the communication channel to the display (Instant Application, Page 6, Lines 21-25, Page 12, Lines 11-24, Page 13, Lines 17-25, FIGS. 1 and 5). If the screen is receiving a new signal for a different mode of operation, this information needs to be sent back to the computer so the computer can command the display apparatus through the microprocessor to switch the display mode of operation and thus, information is being sent from the display apparatus back to the computer across the communication channel and the computer is sending a command across the communication channel back to the microprocessor if the microprocessor is located outside of the computer (Instant Application, Page 10, Lines 5-13, Page 12, Lines 11-24, Page 13, Lines 17-25, Page 14, Lines 16-24, Page 15, Lines 16-31, FIGS. 4, 6 and 7). If the microprocessor is located inside the computer, then the information from the microprocessor to switch the modes of operation is sent from the computer to the display apparatus across the communication channel and thus, the computer is sending information across the communication channel to the display apparatus (Instant Application, Page 6, Lines 21-25, Page 12, Lines 11-24, Page 13, Lines 17-25, FIGS. 1 and 5).

Moreover, a user may change the mode of operation by pressing a button on the display apparatus (Instant Application, Page 13, Lines 15-20, Page 15, Lines 16-21, FIGS. 1, 5-7). This command is sent from the display apparatus to the computer, so the computer can send a command to the microprocessor to switch the mode of operation to the mode of operation chosen by the user and thus, a command is sent

from the display apparatus to the computer and from the computer back to the microprocessor over the communication channel if the microprocessor is located outside of the computer (Instant Application, Page 10, Lines 5-13, Page 12, Lines 11-24, Page 13, Lines 15-25, Page 14, Lines 16-24, Page 15, Lines 16-31, FIGS. 4, 6, and 7). During this pathway, the command selected by the user by pressing a button may be sent from a display apparatus located inside the television across the communication channel back to the computer (Instant Application, Page 14, Lines 16-24, Page 15, Lines 16-21, FIGS. 1 and 5-7). The computer then resends the command to the microprocessor to switch the modes of operation in the display apparatus located within the television and thus, the communication channel must be able to send information and commands to the television from the computer and from the television to the computer as well (Instant Application, Page 14, Lines 16-24, Page 15, Lines 16-21, FIGS. 1 and 5-7).

The VGAFP and the TVFP lines of Song do not send commands or receive commands and information. For example, FIG. 1 of Song clearly shows that the signal of the VGAFP and the TVFP lines only go in one direction from the computer or television to the display apparatus. Also, the VGAFP and the TVFP lines, as found by the Patent Office, are used to send out horizontal and vertical sync signals. The Patent Office asserts that these signals can control and change the display mode of operation of the display apparatus making the signals commands. However, vertical and horizontal sync signals are merely instructions for the monitor, so the monitor knows when and how to display beams of light on the screen of the display apparatus. This information can be formatted for the different modes of operation, interlaced and noninterlaced. However, receiving a signal formatted for one mode of operation will not switch or command the display apparatus to switch between modes; the signal is merely formatted for one specific mode. For example, Song states:

> It is then followed by *testing* the frequency and polarity of the horizontal and vertical sync signals. The *consequence of the test* is finally judge of the equivalence. If it is not the same, control signal MOSC is converted into low power level after three seconds. If it is the same, a certain subcircuit among seven control modes which are below the node E of the FIG. 9A is immediately to be enforced on the basis of the frequency and

> the polarity subbranch of the horizontal and vertical sync signal *which has been obtained by test*

(Song, Column 9, Lines 57-67). Therefore, the VGAFP and TVFP lines simply send out information in one direction from the computer or television to the display apparatus that is tested for by the system and do not send commands or receive commands and information.

The Patent Office asserts that the MCU 9 of FIG. 1 in Song in combination with the MUX disclosed in FIG. 1 of Iwaki is equivalent to the microprocessor of Claim 1. Claim 1 generally recites, "a microprocessor for receiving commands from said host computer system, said microprocessor comprising control logic for switching said display apparatus between said interlaced and noninterlaced modes of operation in response to said commands and enabling an overlay window." Therefore, the microprocessor of Claim 1 contains control logic for switching the display apparatus between interlaced and noninterlaced modes of operation in response to commands.

The microprocessor MCU 9 disclosed in Song does not contain control logic for switching the display apparatus between interlaced and noninterlaced modes of operation as found by the Patent Office. The Patent Office asserts that the MUX disclosed in Iwaki contains control logic for switching the display apparatus between interlaced and noninterlaced modes of operation. However, the MUX of FIG. 1 of Iwaki merely selects one of noninterlaced video data or combining noninterlaced video data (column 4 line 25-31). A multiplexer performs logic functions by combining different data signals and is not a central processing unit or computation engine like a microprocessor. For example, Iwaki states, "The mutiplexor (MUX) selects one of *noninterlaced video data* generated by the interlaced data appending circuit 102, and graphics data, *or combines the noninterlaced video data* on the graphics data." Therefore, the MUX of Iwaki cannot implement a command to change the mode of operation between interlaced and noninterlaced modes of operation. Consequently, neither the MUX of Iwaki nor the MCU 9 of Song are equivalent to the microprocessor of Claim 1 because neither are capable of,

individually or in combination, implementing a command to change the mode of operation between interlaced and noninterlaced.

Claim 13 is directed to a computer system comprising a display apparatus and was rejected for the same reasons as the display apparatus claimed in Claim 1. Applicant respectfully traverses these rejections for at least the same reasons given in the traversal of Claim 1.

Claim 29 is directed to method of operating a computer system to control a display apparatus that generally includes a communication channel as generally included in Claim 1. These elements were rejected for the same reasons and prior art as the display apparatus claimed in Claim 1. Applicant respectfully traverses these rejections for at least the same reasons given in the traversal of Claim 1.

Claim 34 is directed to a computer system comprising a communication channel and a microprocessor for receiving commands from the host computer system as generally included in Claim 1. These elements were rejected for the same reasons and prior art as the display apparatus claimed in Claim 1. Applicant respectfully traverses these rejections for at least the same reasons given in the traversal of Claim 1.

Claims 38, 40, 42, and 44 are directed to an overlay window that allows the user to position at least one overlay screen anywhere the user desires. An overlay window that allows the user to position at least one overlay screen anywhere the user desires has not been disclosed by any of the cited references. For example, the cited reference, Ersoz, discloses a 4x3 video being overlaid on top of a 16x9 video (FIG. 1(c)) and does not include an element that allows at least one overlay picture window to be positioned anywhere the user desires.

Claims 39, 41, 43, and 45 are directed to an overlay window that allows the user to utilize other computer functions on at least one of the underlying screens. An

overlay window that allows the user to utilize other computer functions on at least one of the underlying screens has not been disclosed by any of the cited references. For example, the cited reference, Ersoz, discloses a 4x3 video being overlaid on top of a 16x9 video (FIG. 1(c)) and does not disclose an element that allows the user to utilize other computer functions on at least one of the underlying screens.

It is contended that all of the claims rejected under this section depend on independent Claims 1, 13, 29, and 34 all of which are non-obvious based on the rationale above. Thus, dependent Claims 2-12, 14-28 and 35-45 (which depend on independent Claims 1, 13, or 29) should be allowed.

Consequently, Claims 1-45 should be allowed.

CONCLUSION

In light of the forgoing, reconsideration and allowance of the claims is earnestly solicited.

Respectfully submitted,

Gateway, Inc.,

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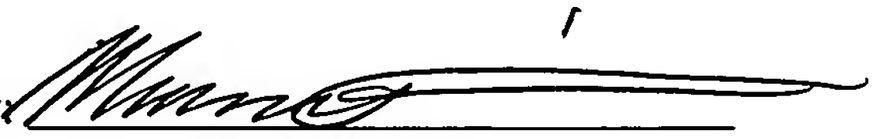
By: 

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